

# Specification

		08D1A	12D3A	16D3A	20D3A	25D3A	
<b>Water Loop Condition</b>							
Cooling Capacity	kW	5.8	9.3	12.4	13.3	22.3	
Cooling Power Input	kW	1.40	2.42	3.16	3.40	5.80	
EER	-	4.14	3.84	3.92	3.90	3.84	
Heating Capacity	kW	8.0	11.7	16.3	19.6	32.9	
Heating Power Input	kW	1.80	2.97	3.90	4.20	7.80	
COP	-	4.44	3.95	4.18	4.67	4.21	
Load Water Flow	m3/h	1.0	1.6	2.2	2.3	4.0	
Load Water Pressure Drop	kPa	25.0	25.4	21.0	20.0	21.0	
Source Water Flow	m3/h	1.4	1.9	2.7	2.9	4.7	
Source Water Pressure Drop	kPa	14.0	39.4	12.4	25.0	23.0	
<b>Ground Water Condition</b>							
Cooling Capacity	kW	6.6	10.1	13.5	14.5	24.4	
Cooling Power Input	kW	1.17	2.10	2.75	2.83	5.00	
EER	-	5.63	4.81	4.89	5.12	4.88	
Heating Capacity	kW	7.0	10.5	13.7	16.2	27.7	
Heating Power Input	kW	1.76	2.91	3.81	4.2	7.3	
COP	-	3.97	3.61	3.58	3.86	3.79	
Load Water Flow	m3/h	1.2	1.7	2.3	2.6	4.1	
Load Water Pressure Drop	kPa	20.0	29.5	13.0	14.0	15.0	
Source Water Flow	m3/h	0.7	0.9	1.3	1.5	2.4	
Source Water Pressure Drop	kPa	15.0	12.9	8.1	9.0	6.0	
<b>Ground Loop Condition</b>							
Cooling Capacity	kW	6.3	9.9	12.9	13.7	23.7	
Cooling Power Input	kW	1.25	2.20	2.84	3.00	5.23	
EER	-	5.01	4.49	4.53	4.56	4.53	
Heating Capacity	kW	6.8	10.1	13.5	15.8	27.0	
Heating Power Input	kW	1.77	2.88	3.79	4.24	7.25	
COP	-	3.85	3.52	3.57	3.73	3.72	
Load Water Flow	m3/h	1.1	1.7	2.2	2.3	4.1	
Load Water Pressure Drop	kPa	28.0	29.1	12.9	13.0	14.0	
Source Water Flow	m3/h	1.4	2.0	3.2	3.1	4.9	
Source Water Pressure Drop	kPa	11.0	43.3	20.7	34.0	25.0	
<b>General</b>							
Power supply	V/Ph/Hz	220/1/50	380/3/50				
Refrigerant	-	R410A					
Refrigerant Charge	kg	1.6	1.7	1.8	2.5	4.7	
Compressor Type		Scroll Compressor					
Compressor Qty	unit	1	1	1	1	1	
Compressor RLA	-	12.8	5.8	7.3	10.7	18.6	
Compressor LRA	-	54	49	58	67	100	
Load Water Pipe	FPT	Φ(mm)	DN20	DN25	DN25	DN25	DN32
Source Water Pipe	FPT	Φ(mm)	DN20	DN25	DN25	DN25	DN32
Net Dimension	Width	mm	826	826	826	826	1168
	Depth	mm	692	692	692	692	711
	Height	mm	648	648	648	648	953
Net Weight	kg	100	110	124	140	241	
Noise Level	dB(A)	50	51	51	52	53	

			30D3A	35D3A	45D3A	67D3A	70D3A	100D3A
<b>Water Loop Condition</b>								
Cooling Capacity		kW	27.7	33.2	41.3	53.8	64.4	80.1
Cooling Power Input		kW	6.39	7.55	10.04	12.52	14.79	19.67
EER		-	4.34	4.4	4.11	4.3	4.35	4.07
Heating Capacity		kW	37.3	44	55.9	72.4	85.4	108.4
Heating Power Input		kW	8.1	9.6	12.37	15.87	18.81	24.24
COP		-	4.6	4.58	4.52	4.56	4.54	4.47
Load Water Flow		m3/h	4.7	5.4	7.2	9.2	11.1	13.8
Load Water Pressure Drop		kPa	39.3	30.4	33.3	39.5	39.2	39.6
Source Water Flow		m3/h	5.5	6.4	8	10.7	12.4	15.5
Source Water Pressure Drop		kPa	48.8	27.6	28.1	57.7	60.1	71.2
<b>Ground Water Condition</b>								
Cooling Capacity		kW	30.3	35	46.1	58.7	67.9	89.4
Cooling Power Input		kW	5.55	6.52	8.74	10.87	12.78	17.13
EER		-	5.45	5.36	5.27	5.4	5.31	5.22
Heating Capacity		kW	31.2	35.5	46.7	60.5	68.9	90.6
Heating Power Input		kW	8.06	9.45	11.88	15.48	18.52	23.28
COP		-	3.87	3.76	3.93	3.91	3.72	3.89
Load Water Flow		m3/h	5	6.2	7.8	10.1	11.7	15.4
Load Water Pressure Drop		kPa	44	37.5	39.6	50.3	48.3	48.3
Source Water Flow		m3/h	2.8	3.1	4	5.4	6	7.8
Source Water Pressure Drop		kPa	8	6	5.5	16.5	15.2	15.3
<b>Ground Loop Condition</b>								
Cooling Capacity		kW	29	33.3	43.1	56.2	64.6	83.6
Cooling Power Input		kW	5.73	6.74	9.08	11.76	13.38	18.04
EER		-	5.06	5.06	4.75	4.78	4.83	4.63
Heating Capacity		kW	31.5	35.4	46	61.1	68.7	89.2
Heating Power Input		kW	8.03	9.44	11.88	16.22	18.53	24.68
COP		-	3.93	3.75	3.87	3.77	3.71	3.62
Load Water Flow		m3/h	5	5.7	7.1	9.7	11.1	14.4
Load Water Pressure Drop		kPa	45	34.7	37.1	47.2	39.7	41.5
Source Water Flow		m3/h	5.5	6.6	8.4	11.5	12.8	m3/h
Source Water Pressure Drop		kPa	40.8	29	31.6	62.3	61.7	71.6
<b>General</b>								
Power		V/Ph/Hz	380/3/50					
Refrigerant		-	R410A					
Refrigerant Charge		kg	3.6	6	5.9	7	9.5	13
Compressor Type			Scroll Compressor					
Compressor Qty		unit	1	1	1	2	2	2
Compressor RLA		-	20	20.7	29.3	40	41.4	58.6
Compressor LRA		-	110	110	174	220	220	348
Load Water Pipe	FPT	Φ(mm)	DN32	DN40	DN40	DN50	DN50	DN50
Source Water Pipe	FPT	Φ(mm)	DN32	DN40	DN40	DN50	DN50	DN50
Net Dimension	Width	mm	1168	1168	1168	1168	1168	1168
	Depth	mm	711	711	711	711	711	711
	Height	mm	953	953	953	1778	1778	1778
Net Weight		kg	252	285	315	484	560	620
Noise Level		dB(A)	53	54	54	55	56	61

Note:

- Cooling: Load Water inlet/outlet: 12°C/7°C; Source water inlet/outlet: 30°C/35°C (Water Loop), 18°C/29°C (Ground Water), 25°C/30°C (Ground Loop).
- Heating: Load Water inlet/outlet: 40°C/45°C; Source water inlet: 20°C/ (Water Loop), 15°C (Ground Water), 10°C (Ground Loop), same source water flow as in cooling mode.
- RLA: Rated load current; LRA: Locked Rotor current.
- Glycol will be needed when source water inlet below 3°C, Glycol concentration: 10%~20%;
- Product specification might be changed without prior notice due to product engineering evolution. pls always refer to the nameplate of equipment.

## Coefficient table

### Cooling Water Loop (°C)

Source water inlet	20		25		30		35		40	
Chilled water outlet	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input
5	1.039	0.775	0.984	0.884	0.930	1.003	0.872	1.138	0.810	1.302
7	1.116	0.768	1.054	0.881	1.000	1.000	0.938	1.135	0.872	1.293
10	1.233	0.765	1.171	0.878	1.105	0.997	1.039	1.129	0.969	1.280
12	1.318	0.762	1.248	0.877	1.178	0.996	1.112	1.125	1.039	1.277
15	1.457	0.759	1.380	0.876	1.302	0.995	1.225	1.125	1.147	1.270

### Cooling Ground Water (°C)

Source water inlet	15		18		20		22		25	
Chilled water outlet	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input
5	0.9480	0.9290	0.9200	1.0070	0.8990	1.0600	0.8640	1.0740	0.8430	1.2080
7	1.0310	0.9260	1.0000	1.0000	0.9760	1.0570	0.9270	1.0710	0.9200	1.2010
10	1.1470	0.9150	1.1120	0.9930	1.0840	1.0460	1.0240	1.0670	1.0210	1.1910
12	1.2240	0.9080	1.1890	0.9860	1.1610	1.0390	1.0980	1.0670	1.0980	1.1870
15	1.3570	0.8980	1.3150	0.9750	1.2870	1.0280	1.2100	1.0670	1.2100	1.1770

### Cooling Ground Loop (°C)

Source water inlet	15		18		20		22		25	
Chilled water outlet	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input	Cooling capacity	Power input
5	0.951	0.929	0.923	1.007	0.867	1.148	0.811	1.307	0.748	1.491
7	1.031	0.926	1.000	1.000	0.941	1.141	0.881	1.300	0.818	1.481
10	1.147	0.915	1.112	0.993	1.045	1.131	0.983	1.290	0.916	1.466
12	1.224	0.908	1.189	0.986	1.119	1.124	1.056	1.283	0.983	1.456
15	1.357	0.898	1.315	0.975	1.245	1.117	1.168	1.272	1.091	1.445

### Heating Water Loop (°C)

Source water inlet	15		17		18		20		22	
Hot water outlet	Heating capacity	Power input	Heating capacity	Power input	Heating capacity	Power input	Heating capacity	Power input	Heating capacity	Power input
35	0.913	0.751	0.969	0.745	0.997	0.743	1.056	0.737	1.117	0.732
40	0.906	0.839	0.963	0.839	0.991	0.836	1.053	0.836	1.120	0.836
42	0.893	0.884	0.951	0.884	0.979	0.881	1.038	0.881	1.101	0.879
45	0.876	0.955	0.931	0.955	0.958	0.953	1.016	0.950	1.078	0.950
47	0.865	1.008	0.918	1.006	0.944	1.003	1.000	1.000	1.061	0.997
50	0.849	1.090	0.900	1.088	0.926	1.084	0.979	1.082	1.038	1.079
55	0.822	1.245	0.868	1.241	0.893	1.237	0.943	1.232	0.998	1.227

### Heating Ground Water (°C)

Source water inlet	12		15		18		22		25	
Hot water outlet	Heating capacity	Power input	Heating capacity	Power input	Heating capacity	Power input	Heating capacity	Power input	Heating capacity	Power input
35	0.978	0.782	1.066	0.774	1.162	0.766	1.300	0.755	1.395	0.747
40	0.944	0.887	1.038	0.880	1.180	0.871	1.300	0.863	1.387	0.856
42	0.925	0.935	1.015	0.926	1.147	0.916	1.261	0.909	1.367	0.902
45	0.917	1.012	1.000	1.000	1.128	0.988	1.241	0.981	1.342	0.974
47	0.908	1.065	0.992	1.053	1.117	1.041	1.226	1.031	1.323	1.024
50	0.899	1.151	0.979	1.137	1.100	1.122	1.202	1.110	1.300	1.103
55	0.880	1.307	0.957	1.295	1.069	1.271	1.165	1.259	1.255	1.247

### Heating Ground Loop (°C)

Source water inlet	-3		0		3		6		10	
Hot water outlet	Heating capacity	Power input	Heating capacity	Power input	Heating capacity	Power input	Heating capacity	Power input	Heating capacity	Power input
35	0.726	0.803	0.796	0.797	0.870	0.789	0.952	0.784	1.066	0.774
40	0.709	0.910	0.776	0.900	0.848	0.900	0.925	0.890	1.033	0.880
42	0.703	0.960	0.768	0.950	0.838	0.940	0.913	0.940	1.021	0.930
45	0.692	1.030	0.757	1.020	0.826	1.020	0.897	1.010	1.000	1.000
47	-	-	0.750	1.080	0.820	1.070	0.890	1.060	0.990	1.050
50	-	-	-	-	0.800	1.160	0.870	1.150	0.970	1.140

## Electrical parameters

Model	Power input	Compressor		Max. fuse current (A)
		RLA	LRA	
GW/GL/WLSH-08D1A	220V/1Ph/50Hz	12.8	54	16
GW/GL/WLSH-12D3A	380V/3Ph/50Hz	5.8	49	10
GW/GL/WLSH-16D3A	380V/3Ph/50Hz	7.3	58	10
GW/GL/WLSH-20D3A	380V/3Ph/50Hz	10.7	67	16
GW/GL/WLSH-25D3A	380V/3Ph/50Hz	18.6	100	25
GW/GL/WLSH-30D3A	380V/3Ph/50Hz	20	110	32
GW/GL/WLSH-35D3A	380V/3Ph/50Hz	20.7	110	32
GW/GL/WLSH-45D3A	380V/3Ph/50Hz	29.3	174	40
GW/GL/WLSH-67D3A	380V/3Ph/50Hz	40	220	63
GW/GL/WLSH-70D3A	380V/3Ph/50Hz	41.4	220	63
GW/GL/WLSH-100D3A	380V/3Ph/50Hz	58.6	348	80